

C-A MAINTENANCE, MODIFICATIONS, AND REPAIRS SCHEDULE

R. Zaharatos – October 9, 2001

SCHEDULE SUMMARY(REV. 1)

Maintenance Begins: October 10, 2001, 0800hrs
(protons beam off 0400hrs,
RHIC store possibly to 0800)

Maintenance Ends For AGS/Booster/Linac/SEB: October 10, 2001, 1600hrs

SEB - set-up for HEP October 10, 2001, 1800hrs

RHIC - secured for beam: October 11, 2001, 1800hrs
(exception - PHENIX. Est. late evening of Oct. 11)

RHIC - beam set-up: No later then 0800, Oct. 12

TANDEM Schedule: Oct. 10 - off to load object foils. Oct. 11 - TTB fault study

Machine Areas Access:

AGS	Restricted Access - Oct. 10, 0930hrs to 1430hrs
Booster	Controlled Access - Oct. 10, 1030hrs to, 1330hrs
SEB	Controlled Access - Oct. 10, 0900hrs to 1200hrs
ATR/U Line	Restricted U downstream only - Oct. 10,11
Linac	Restricted Access - Oct. 10, 0800hrs to 1430hrs
RHIC	Restricted Access - Oct. 10, 0800hrs to Oct. 11, 1600hrs

C-A POWERED TESTING REQUESTS

1. RHIC RF – Conditioning (Oct 11 to start of RHIC set-up)
2. AGS - H20 Septum drive
3. AGS - RF System following the installation of feedback ampl's.

PRIMARY JOBS

JOBS STATUS CODE: **C** complete **IP** in-process **RS** reschedule **CAN** cancelled

AGS RING EQUIPMENT

1. Replace RF feedback amplifiers in stations I, II, and JK
2. G10 Kicker - investigate recurring interlock(no indication)
3. H20 Septum - Inspect/ test drives for suspected problem. Check oil level.
4. Ring inspection of enclosure and equipment
5. A20 A/C Dipole - change termination for operation at different frequency
6. Install polarimeter near C20.

AGS EXTERNAL EQUIPMENT

1. Westinghouse Motor/Generator - Thorough cleaning, inspection, and PM's.
2. Tower 1 - down for cleaning(Oct. 10, 0630-1200)

ATR

1. Tower 6 - Maintenance and belts replacement (2 hours downtime)

BOOSTER RING

1. Investigate loss monitor gas leak

BOOSTER EXTERNAL EQUIPMENT

NO REQUESTS

LINAC

1. Install SNS Laser Box in HEBT(6-8hrs)

SEB

1. C7 Line - continue removal of mercury from target
2. LESB3/LESB2/2GEV Separators - condition as long as possible

RHIC

IR's

1. PHENIX - shielding additions
2. STAR - detector work

TUNNEL

1. Installation of AC Vertical Dipole in Sect. 3/4
2. Investigate/search for Cryo leak
3. Snakes - continue installation and p.s.'s commissioning (sect. 9C and 3C)
4. Alcove P.S.'s - repairs/modifications (Bruno)
5. Install Scintillators at 12 O'clock IP(Seberg)

EXTERNAL SUPPORT EQUIPMENT

1. PHOBOS Tower - clean and tighten belts
2. PHENIX Tower - perform cleaning
3. RF Tower - perform cleaning (day 1 of shutdown)
4. STAR Tower - perform cleaning

5. 1012A - connect replacement UPS for Cryo
6. 1004B - Install UPS maintenance by-pass switch for vacuum and controls

DETAILED SCHEDULE

NOTE: RHIC Beam Set-up begins when PHENIX work is complete but no later than
0800 Friday, Oct. 12, 2001

<u>10 Oct</u>	0400	Linac/SEB off for cool-down Tandem available for RHIC injection
	0530	Tandem/Booster/AGS beams off Begin AGS Restricted Access LOTO
	0630	Cleaning of Cooling Tower 1
	0700	Begin Booster Controlled Access LOTO
	0800	RHIC beam off for maintenance shutdown. Prepare for RHIC Restricted Access Begin HP survey of AGS Ring. Begin HP survey of Linac/HEBT
	0900	Linac Restricted Access SEB HP surveys as required (C3/C7)
	0930	AGS Restricted Access Begin Booster HP survey for Controlled Access
	1030	Booster access as required (Controlled Access)
	1430	Begin sweeps and securing for SEB HEP 1. Linac 2. Booster 3. AGS 4. SEB if required
	1530	Equipment and beam set-up for SEB/HEP as sweeps are completed
<u>11 Oct</u>	1800	SEB/HEP Secure RHIC Sector 4 for RF System conditioning
	0800	RHIC - RF conditioning (sect. 4 secured)
	1500	Begin securing RHIC for beam
<u>12 Oct</u>	1800	RHIC secured for beam except for those sections where work is still in progress
	0800	RHIC set-up for beam

C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM
JOBS SCHEDULING REQUEST

GROUP: Accelerator Controls – B. Venegas (ext. 3917, BP 7241), B. Oerter (ext. 2799)

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD’L. SUPPORT</u>	<u>HP SURVEY</u>
1	1007B Alcove	4 hrs.	Find source of oscillations on y07-sxf-ps and y07-sxd.ps for Iref and I current both in cfe-7b-ps1	RHIC power supply group	None

C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM
JOBS SCHEDULING REQUEST

GROUP: Access Controls – D. Meany (ext. 5329, BP 0361), N. Williams (ext. 5346, BP 0554)

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD’L. SUPPORT</u>	<u>HP SURVEY</u>
1	HEBT	2 hrs.	Procedure 4.16b		Yes
2	SEB	1 hr.	Procedure 4.16d		No
3	SEB	2 hrs.	Complete installation of A10 Multiwire Interlock	Instrumentatio n	No
4	SEB	1 hr.	Add relays to Linac HI/LO Vacuum Valve Interlock for Equipment Protection		No

C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM
JOBS SCHEDULING REQUEST

GROUP: Beam Components & Instrumentation: D. Lehn (Ext. 4095 [4276], T. Russo (Ext. 7330 [4201])

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD'L. SUPPORT</u>	<u>HP SURVEY</u>
1	RHIC Ring Sector ¾ (IR)	16 hrs.	AC Dipole – Installation of Vertical AC Dipole Magnet. - Inspection of area for Cap Bank Installation		
2	AGS Ring	4 hrs.	AGS Sextupole Magnets – North Conjunction Area - Survey and possibly rig out of ring.	HP – Survey Riggers	
3	AGS Ring	4 hrs.	H20 Septum – Inspect/Test Drives - Inspect Oil Level	HP – Survey	
4	AGS Ring	10 min.	AGS Splitters – Inspect Oil Levels	HP – Survey	
5	AGS Ring	1 hr.	BTA RLRM – Investigate/Repair Argon Leak	HP – Survey, Pump Room	
6	Booster Ring	1 hr.	BTA RLRM – Investigate/Repair Argon Leak (IF RING IS OPEN – LOW PRIORITY)	HP – Survey, Pump Room	
7	Booster Ring	15 min.	BAF Inspections for upcoming work (IF RING IS OPEN – LOW PRIORITY)	HP- Survey	
8	AGS	1 hr.	C5 & E15 IPM (External to RING) a) Pump out gas lines		
9	Booster Ring	15 min.	C3 Inflector – Inspect Elbow (IF RING IS OPEN – LOW PRIORITY)	HP-Survey	
10	RHIC Ring Sector 7	2 hrs.	Beam Scraper – Adjust gain control for camera		
11	EXP Floor	8 hrs.	LESB3/LESB2/2GEV – Condition as long as possible - Possible Electronics Testing		
12	AGS	2 hrs.	A20MW Inhibit Chassis – Tie in with Access Controls System (External to Ring)	Access Controls	
13	HEBT/Linac	???	Laser Scanner – Support as necessary	HP-Survey	
14	SEB	???	VIDEO – Switchyard/D-Line – Repair if requested	HP-Survey	

C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM
JOBS SCHEDULING REQUEST

GROUP: Collider-Accelerator Power Supplies – R. Zapasek (ext. 2189, BP 4263), D. Bruno
(ext. 5533), BP 4135)

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1	RHIC, 9C, 3C	48 hrs.	Commission RHIC Snake Power Supplies, D. Bruno		
2	1006	8 hrs.	QT Power supplies, clean, W.Eng		
3	RHIC	4 hrs.	50 Amp Correctors, Replace failed power supplies. W. Eng		

C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM
JOBS SCHEDULING REQUEST

GROUP: LINAC – B. Briscoe (ext. 5007, 5010, BP 4225) J. Alessi (ext. 7563)

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD’L. SUPPORT</u>	<u>HP SURVEY</u>
1	HEBT	8 hrs.	Put SNS laser box in HEBT	Vac.	SS2001
2	None	4 hrs.	Test RF Switch in Buncher 1	None	None
3	None	2 hrs.	Check RFQ Crowbar System	None	None
4	None	4 hrs.	Repair Mod 2 Quad ACME Power Supply	None	None
5	None	4 hrs.	Back flush Mod8 PA Power Supply	None	None

C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM
JOBS SCHEDULING REQUEST

GROUP: Main Ring Power Supply Systems: M. Bannon (Ext. 7704) [4224], I. Marneris (Ext. 7027) [4255]

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1		8 hrs.	Westinghouse monthly maintenance		
2		2 hrs.	Westinghouse – install additional pressure switch, oil line and valve in oil pit.	Pump Room, Mike Hamilton	
3		4 hrs.	Westinghouse – connect oil pit alarm into transmitter.		
4		4 hrs.	Investigate QV5 & possibly QV6 in BTA line for circuit breaker trip circuit proper operation.		
5		2 hrs.	Possibly test DH1 in the LTB line for pulsed operation.		
6		3 hrs.	RHIC – UPS at 1012a remove the 2.4kva control power UPS and install and test the new 6kva mitsubishi UPS.	C. Magoulas	
7		4 hrs.	RHIC – UPS at 1004 connect maintenance bypass switch to existing UPS and test.	C. Magoulas	
8		5 hrs.	AGS – UPS at 911B UPS2 mitsubishi unit 15kva shutdown UPS and wire input to N/E feed.	C. Magoulas	
9		1 hr.	LTB – change and test rubber office in flow switch on magnet D5 of the LTB line located on the Booster side of LTB.	Pump Room	
10		2 hrs.	Install 2 pressure switches on the nitrogen system on the BMMPs transformers.	Pump Room	

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GROUP: Maintenance Support: R. Zaharatos (Ext. 7205 [4281], J. Benante (Ext. 4498(1207)

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1	RHIC/Tunnel		Investigate air-cond. Faults in alcoves 5A & 5C	PE (McKay)	
2	RHIC/Tunnel		Perform P.M.'s for all alcove air-cond. Units	PE (McKay)	
3	RHIC/Tunnel		Test all tunnel emergency exhaust fans	PE (McKay), Fire Safety, Acc. Ctrls. Group	
4	RHIC/Tunnel		Relamp	Electricians	
5	RHIC/Tunnel		Inspect Tunnel		
6	AGS Ring		Inspection		
7	AGS Ring		Relamp	Electricians	

C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM
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GROUP: POWER DISTRIBUTION: D. Bastedo (Ext. 2555) [0274], T. Nehring (Ext. 5275) [4246]

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1	Relamp	16 days	Relamp in AGS, Booster and RHIC as required.		
2	1012A	2 days	Connect replacement UPS for Cryo		
3	911B	4 days	Provide new normal/emergency feed to UPS 911BUPS2		
4	1004B	3 days	Install maintenance by-pass switch for UPS for vacuum and controls in 1004B		
5	RHIC Tunnel	16 days	Check lead heaters as required.		

C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM
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GROUP: Vacuum - S. Gill (Ext. 4627) [4164], M. Mapes (Ext. 2841)[4277]

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1	RHIC / 7:00		Check Turbo @ 7:00 Triplett		
2	RHIC / 5:00		Check Turbo @ 5:00 (YO5 P.I.8)		
3	HEBT		Assist with repair of HEBT 2	LINAC	

C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM
JOBS SCHEDULING REQUEST

GROUP: Water Systems: J. deBoer (Ext. 4668, BP [4250], L. Vogt (Ext. 4797, BP4273) R. Grandinetti (Ext. 7186, BP [4239]

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1	C-A Complex Bldg. Various	32 mhrs.	Perform draining and cleaning of C-A Towers. Towers to be cleaned will be determined prior to maintenance day.	None	None
2	Booster Ring Bldg. 914	6 mhrs.	Check/Repair BTA line measure flow and clean strainers.	None	RWP and Survey
3	Westinghouse Bldg. 911A	6 mhrs.	Replace 1/4" lines and add valves on the oil cooling system.	Power Room Tech's	RWP
4	Twr-2 near Bldg. 912	4 mhrs.	Mod to Tower make-up line.	P.E. Plumbers	None
5	AGS Ring, Bldg. 913	2 mhrs.	Inspect ring for leaks and repair if required.	None	Survey of Ring including cat walk
6	Main Magnet HTXR cooling Bldg. 911A	2 mhrs.	Repack MM HTXR temp controller valve	None	None
7	RHIC Twr 6 Bldg. 100P	3 mhrs.	Replace tower belts	None	None
8	Phobos Twr Bldg. 1010	1 mhr.	Tighten tower fan belts	None	None